217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

Silgan Containers Manufacturing Corporation
Attn: David Wood
400 North 15th Street
Rochelle, Illinois 60168

Application No.: 02030005 I.D. No.: 141805AAF
Applicant's Designation: 211 FPEO Date Received: March 4, 2002
Subject: 211 Diameter FPEO Project
Date Issued: June 3, 2002
Location: 400 North 15th Street, Rochelle

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of the 211 Diameter Full Panel Easy Open (FPEO) line, with end liners, conversion press(es), and post repair spray operations controlled by a new concentrator/thermal oxidizer system and a new permanent total enclosure for the existing three sheet coating lines which will then vent to the existing oxidizer system or a new oxidizer system as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1.0 Unit Specific Conditions

1.1 Unit: End Liners
Control: None

1.1.1 Description

Sheets of pre-coated metal are fed into the End Press Process. The End Presses form metal can ends (lids) by stamp forming and cutting the pre-coated blanks. After forming and cutting, the ends go through End Liners where the channel around the perimeter of each end is filled with and end sealing compound or "end compound". The end lines apply compliant compound that meets the requirements for volatile organic material (VOM) emissions without the use of add-on control. The nozzles that apply end compound must be cleaned intermittently. The cleaning operation is referred to as a "mister".

1.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
End Liners	End Liners with "Misters"	None

1.1.3 Applicability Provisions and Applicable Regulations

a. The "affected end liner" for the purpose of these unit-specific conditions, is each end liner as described in Conditions 1.1.1 and 1.1.2.

b. Each affected end liner is subject to 35 IAC Part 215, Subpart F, Coating Operations: No owner or operator of a coating line shall cause or allow the emission of volatile organic material to exceed the following limitations on coating materials, excluding water and any compounds which are specifically exempted from the definition of volatile organic material, delivered to the coating applicator:

	kg/l	lb/gal
End Sealing Compound Coat	0.44	3.7

c. Each affected end liner is subject to 35 IAC 212.321(a), which provides that the Permittee shall not cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].

1.1.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected end liner not being subject to the New Source Performance Standards (NSPS) for the Beverage Can Surface Coating Industry, 40 CFR Part 60, Subpart WW, because the affected end liner is not a beverage can coating line.

b. No owner or operator of a coating line subject to the limitations of 35 IAC 215.204 is required to meet the limitations of 35 IAC Part 215, Subpart K (35 IAC 215.301 or 215.302), after the date by which the coating line is required to meet 35 IAC 215.204 [35 IAC 215.209].

1.1.5 Control Requirements

None

1.1.6 Emission Limitations

There are no specific emission limitations for this unit, however there are source wide emission limitations in Condition 4 that include this unit.

1.1.7 Testing Requirements

The VOM content of coatings shall be determined by Method 24, 40 CFR Part 60, Appendix A, incorporated by reference in 35 IAC 215.105 except for glues and adhesive coatings, two component reactive coatings forming volatile reaction products, coatings requiring energy other than heat to initiate curing, and coatings requiring high temperature catalysis for curing, providing the person proposing testing of the material submits to the Illinois EPA proof that the Method 24 results would not be representative and proof that a proposed alternative test method gives representative, accurate test results. For printing inks, the volatile organic material content shall be determined by Method 24A, 40 CFR Part 60, Appendix A incorporated by reference in 35 IAC 215.105. Any alternate test method must be approved by the Illinois EPA which shall consider data comparing the performance of the proposed alternative to the performance of the approved test method(s). If the Illinois EPA determines that such data demonstrates that the proposed alternative will achieve results equivalent to the approved test method(s), the Illinois EPA shall approve the proposed alternative [35 IAC 215.208(a)].

1.1.8 Monitoring Requirements

None

1.1.9 Recordkeeping Requirements

The source wide recordkeeping requirements specified in Condition 4d include the affected end liners.

1.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected end liners with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

1.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected end liners without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee’s obligation to properly obtain a construction permit in a timely manner for any activity

constituting construction or modification of the source, as defined in 35 IAC 201.102:

Change in the materials used and the products produced on the affected end liners as long as these emission units continue to comply with all emission limitations and requirements of this permit.

1.1.12 Compliance Procedures

Compliance with the emission limits established in Condition 4 shall be based on the recordkeeping requirements in Condition 4d and the emission factors and formulas listed below:

VOM Emissions (tons) = (Material Usage, gallons) x (VOM Content of Material, lb/gallon)/(2000 lb/ton)

1.2 Unit: Conversion Press
Control: None

1.2.1 Description

Most of the ends produced by the end presses will be converted to an "easy-open" consumer feature. Lined ends are processed through a conversion press(es) that scores the end for opening and attaches a pull-tab. Tab lube is used to facilitate forming of the aluminum stock into a pull-tab.

1.2.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Conversion Press	Conversion Press(es)	None

1.2.3 Applicability Provisions and Applicable Regulations

a. The “affected conversion press” for the purpose of these unit-specific conditions, is a conversion press as described in Conditions 1.2.1 and 1.2.2.

b. The affected conversion press is subject to 35 IAC Part 215, Subpart K, Use of Organic Material: The Permittee shall not cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in 35 IAC 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of Subpart K shall apply only to photochemically reactive material [35 IAC 215.301].

c. The affected conversion press is subject to 35 IAC 212.321(a), which provides that the Permittee shall not cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].

1.2.4 Non-Applicability of Regulations of Concern

This permit is issued based on the affected conversion press not being subject to the New Source Performance Standards (NSPS) for the Beverage Can Surface Coating Industry, 40 CFR Part 60, Subpart WW, because the affected conversion press is not a beverage can coating line.

1.2.5 Control Requirements

None

1.2.6 Emission Limitations

There are no specific emission limitations for this unit, however there are source wide emission limitations in Condition 4 that include this unit.

1.2.7 Testing Requirements

None

1.2.8 Monitoring Requirements

None

1.2.9 Recordkeeping Requirements

The source wide recordkeeping requirements specified in Condition 4d include the affected conversion press.

1.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected conversion press with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

1.2.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected conversion press without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Change in the materials used and the products produced on the affected conversion presses as long as these emission units continue to comply with all emission limitations and requirements of this permit.

1.2.12 Compliance Procedures

Compliance with the emission limits established in Condition 4 shall be based on the recordkeeping requirements in Condition 4d and the emission factors and formulas listed below:

VOM Emissions (tons) = (Material Usage, gallons) x (VOM Content of Material, lb/gallon)/(2000 lb/ton)

1.3 Unit: Post Repair Spray Operations
Control: Concentrator/Thermal Oxidizer System

1.3.1 Description

In the post repair process, ends that have been cut or scored in the conversion press are re-sealed with a coating to protect the contents of a filled container against contamination. Nine post repair spray operations are being added. One new post repair spray operation is controlled using an existing concentrator upgraded with additional adsorption media and an existing thermal oxidizer (control for the 300 FPEO line) while the remaining eight units are controlled by a new concentrator and new thermal oxidizer. The purpose of the new concentrator is to convert a high-volume, low-VOM, air stream into a high-VOM, lower-volume exhaust. A permanent total enclosure (PTE) will be installed on the affected post repair spray operation.

1.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Post Repair Spray Operation	Post Repair Spray Operations	Permanent Total Enclosure and Concentrator/ Thermal Oxidizer System

1.3.3 Applicability Provisions and Applicable Regulations

a. The "affected post repair spray operation" for the purpose of these unit-specific conditions, is the post repair spray operation as described in Conditions 1.3.1 and 1.3.2.

b. The Permittee shall comply with 35 IAC 215.205, rather than with 35 IAC 215.204. The methods or procedures used to determine emissions of organic material under 35 IAC 215.205 shall be approved by the Illinois EPA. Emissions of volatile organic material from sources subject to 35 IAC 215.204, are allowable, notwithstanding the limitations in 35 IAC 215.204, if the emissions are controlled by an afterburner system which provides:

i. 75% reduction in the overall emissions of volatile organic material from the coating line; and

ii. Oxidation to carbon dioxide and water of 90% of the nonmethane volatile organic material (measured as total combustible carbon) which enters the afterburner [35 IAC 215.205(a)].

c. Each affected post repair spray operation is subject to 35 IAC 212.321(a), which provides that the Permittee shall not cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].

1.3.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected post repair spray operation not being subject to the New Source Performance Standards (NSPS) for the Beverage Can Surface Coating Industry, 40 CFR Part 60, Subpart WW, because the affected post repair spray operation is not a beverage can coating line.

b. No owner or operator of a coating line subject to the limitations of 35 IAC 215.204 is required to meet the limitations of 35 IAC Part 215, Subpart K (35 IAC 215.301 or 215.302), after the date by which the

coating line is required to meet 35 IAC 215.204 [35 IAC 215.209].

1.3.5 Control Requirements

a. The concentrator/thermal oxidizer system shall be operated to achieve at least 100 percent capture and 95 percent overall control efficiency for VOM. Note: this requirement is more stringent than the control requirements of Condition 1.3.3(b).

b. The thermal oxidizer combustion chamber shall be preheated to at least the manufacturer's recommended temperature but no less than the temperature at which compliance was demonstrated in the most recent compliance test, before the coating process is begun, and this temperature shall be maintained during operation of the affected post repair spray operation.

c. To qualify as permanent total enclosure (PTE), the enclosure installed on the affected post repair spray operation shall meet the requirements for a PTE established in 35 IAC 218, Appendix B, Procedure T, so that the capture efficiency of VOM on the affected post repair spray operation may be presumed to be 100 percent.

1.3.6 Emission Limitations

a. There are no specific emission limitations for this affected post repair spray operation, however there are source wide emission limitations in Condition 4 that include this affected post repair spray operation.

b. Emissions attributable to the combustion of natural gas from the thermal oxidizer shall not exceed the following limits:

Pollutant	Emissions (Tons/Year)
NO_x	0.44
CO	0.37
VOM	0.02

1.3.7 Testing Requirements

a. The VOM content of coatings shall be determined by Method 24, 40 CFR Part 60, Appendix A, incorporated by reference in 35 IAC 215.105 except for glues and adhesive coatings, two component reactive coatings forming volatile reaction products, coatings

requiring energy other than heat to initiate curing, and coatings requiring high temperature catalysis for curing, providing the person proposing testing of the material submits to the Illinois EPA proof that the Method 24 results would not be representative and proof that a proposed alternative test method gives representative, accurate test results. For printing inks, the volatile organic material content shall be determined by Method 24A, 40 CFR Part 60, Appendix A incorporated by reference in 35 IAC 215.105. Any alternate test method must be approved by the Illinois EPA which shall consider data comparing the performance of the proposed alternative to the performance of the approved test method(s). If the Illinois EPA determines that such data demonstrates that the proposed alternative will achieve results equivalent to the approved test method(s), the Illinois EPA shall approve the proposed alternative [35 IAC 215.208(a)].

b. The Permittee shall comply with the testing requirements in Condition 3a for the permanent total enclosure and thermal oxidizer. The reporting and notification requirements of Condition 3b, c, and d also apply.

1.3.8 Monitoring Requirements

The thermal oxidizer shall be equipped with a continuous monitoring device which is installed, calibrated, maintained, and operated according to vendor's specifications at all times that the thermal oxidizer is in use. This device shall monitor the thermal oxidizer combustion chamber temperature.

1.3.9 Recordkeeping Requirements

a. In addition to the records required by Condition 4d, the Permittee shall maintain records of the following items for affected post repair spray operation to demonstrate compliance with Condition 4:

The Permittee shall collect and record the following information each day.

i. Thermal oxidizer combustion chamber monitoring data.

ii. A log of operating time for the capture system, thermal oxidizer, monitoring device, and the associated emission unit(s).

iii. A maintenance log for the capture system, thermal oxidizer, and monitoring device

detailing all routine and non-routine maintenance performed including dates and duration of any outages.

b. The Permittee shall maintain a record of the maximum firing rate of the thermal oxidizer (mmbtu/hr).

1.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected post repair spray operation with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

1.3.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected post repair spray operation without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Change in the materials used and the products produced on the affected post repair spray operations as long as these emission units continue to comply with all emission limitations and requirements of this permit.

1.3.12 Compliance Procedures

a. Compliance with the emission limits established in Condition 4 shall be based on the recordkeeping requirements in Condition 4d and the emission factors and formulas listed below:

VOM Emissions (tons) = (Material Usage, gallons) x (VOM Content of Material, lb/gallon) x (1 - K*/100)/(2000 lb/ton)

* K is the overall control efficiency of the concentrator/thermal oxidizer system as specified by testing.

b. Compliance with the emission limits in Condition 1.3.6(b) for the thermal oxidizer shall be based on the operating records required by Condition 1.3.9 and appropriate emission factors:

Pollutant	Emission Factor (Lbs/mmscf)

NO_x	100
CO	84
VOM	5.5

2a. This permit authorizes construction of permanent total enclosure (PTE) for the three existing sheet coating lines. These enclosures shall be installed no later than 180 days after initial production of commercial ends on the 211 Diameter FPEO Line.

b. i. The existing thermal oxidizer or new thermal oxidizer used to control VOM emissions from the three existing sheet coating lines shall be operated to achieve at least 100 percent capture and 98 percent overall control efficiency for VOM.

ii. The thermal oxidizer combustion chamber shall be preheated to at least the manufacturer's recommended temperature but no less than the temperature at which compliance was demonstrated in the most recent compliance test, before the coating process is begun, and this temperature shall be maintained during operation of the sheet coating operation.

iii. To qualify as permanent total enclosure (PTE), the enclosure installed on the three existing sheet coating lines shall meet the requirements for a PTE established in 35 IAC 218, Appendix B, Procedure T, so that the capture efficiency of VOM on the three existing coating lines may be presumed to be 100 percent.

3a. Within 240 days of initial production of commercial ends on the 211 Diameter FPEO Line, the VOM emissions of the existing thermal oxidizers (sheet coating, post repair) and the new thermal oxidizer(s) (post repair and/or sheet coating) controlling the new post repair spray operations shall be measured during conditions which are representative of maximum emissions.

i. The test shall be designed to measure the VOM destruction efficiency across the thermal oxidizers. In conjunction with this test, the Permittee shall verify that the enclosure for the three existing sheet coating lines and the affected post repair spray operation meet the criteria for Permanent Total Enclosure.

ii. Volatile organic material or organic material concentrations in a stream shall be measured by Method 18, 40 CFR 60, Appendix A, except as follows. ASTM D-4457 may be used for halogenated organic compounds. Method 25, 25A or 25B, 40 CFR 60, Appendix A may be substituted for Method 18 provided the Permittee submits calibration data and other proof that this method provides the information in the emission units of the applicable standard. The volumetric flow rate and gas velocity shall be determined in accordance with Methods 1, 1A, 2, 2A, 2C, 2D, 3 and 4, 40 CFR Part 60, Appendix A.

b. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date

of testing shall be submitted a minimum of thirty days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

c. At least 30 days prior to the actual date of testing, a written test plan shall be submitted to the Compliance Section of the Division of Air Pollution Control for review. This plan shall describe the specific procedures for testing, including as a minimum:

   i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

   ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

   iii. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations.

   iv. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods.

   v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

   vi. The format and content of the Source Test Report.

d. Copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The Final Report shall include as a minimum:

   i. A summary of results

   ii. General information

   iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule

   iv. Detailed description of test conditions, including

      A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption

      B. Control equipment information, i.e., equipment condition and operating parameters during testing, and

C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration

4a. The Permittee shall comply with the following emission limitations until successful testing and completion of construction of the permanent total enclosure for the three existing sheet coating lines has occurred. Compliance with the annual limit shall be determined from a running total of 12 months of data.

Material	Material Usage (Gal/Mo)	Material Usage (Gal/Yr)	VOM Emissions (Tons/Mo)	VOM Emissions (Tons/Yr)
End Compound	5,208	41,667	9.3	75.0
Mister	39	343	0.2	1.1
Tab Lube	770	6,164	2.6	16.1
Post Repair Spray[1]	12,706	59,492	2.2	10.8
Sheet Coating[2]	---	---	16.2	130.0
Solvent Cleanup	449	3,597	1.8	12.0
Other[3]	---	---	0.2	3.0
			Total:	248.0

[1] See Condition 1.3.12 for compliance procedures

[2] As an alternative to limits on coating usage, this Permit requires weekly recordkeeping to demonstrate compliance.

[3] Storage tanks, video jet printers and paint strip tank

b. Following successful testing and completion of construction of the permanent total enclosure for the three existing sheet coating lines, emissions and operation of the of this source (all emission units at the Rochelle Facility) shall not exceed the following limits. Compliance with the annual limit shall be determined from a running total of 12 months of data.

Material	Material Usage (Gal/Mo)	Material Usage (Gal/Yr)	VOM Emissions (Tons/Mo)	VOM Emissions (Tons/Yr)
End Compound	9,852	78,817	17.7	141.6
Mister	73	732	0.3	2.3
Tab Lube	1,097	10,966	3.6	28.6
Post Repair Spray[1]	10,940	109,395	2.3	18.5
Sheet Coating[2]	---	---	5.0	40.0
Solvent Cleanup	420	4,196	1.8	14.0
Other[3]	---	---	0.4	3.0
			Total:	248.0

[1] See Condition 1.3.12 for compliance procedures

[2] As an alternative to limits on coating usage, this Permit requires weekly recordkeeping to demonstrate compliance.

[3] Storage tanks, video jet printers and paint strip tank

c. At no time, including the period of construction, shall emissions of VOM from the source (all emission units at the Rochelle Facility) exceed 248.0 tons VOM per year. Compliance with this annual limit shall be determined from a running total of 12 months of data.

d. The Permittee shall maintain records of the following items for the source (all emission units at the Rochelle facility) to demonstrate compliance with Condition 4(a), (b) and (c).

i. Usage of each material used on all emission units other than the coaters (gallons/month and gallons/year);

ii. Usage of each material used for the coaters (gallons/week, gallons/month and gallons/year);

iii. VOM and HAP content of each material (lb/gallon, less water);

iv. VOM and HAP emissions from the coaters (tons/week, tons/month and tons/year).

v. VOM and HAP emissions from each material used at the source (tons/month and tons/year).

e. The Permittee shall promptly notify the Illinois EPA, Compliance Section, of exceedances in the VOM emission limits in Condition 4 as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

f. This permit supersedes previous VOM emission limitations and recordkeeping requirements from prior construction permits for the source. However, the CAAPP permit must be revised before the source may emit 248 tons of VOM per year and these new operating limitations supersede provisions in the issued CAAPP permit which only address current operation at the source, i.e., do not address the 211 Diameter FPEO Line.

g. This permit allows a 12 ton/year increase in the permitted VOM emissions of the source attributable to the operation of the new 211 Diameter FPEO Line, i.e., permitted annual VOM emissions of 248 tons, rather than 236 tons.

Note: Condition 4 limits the source to below the major source applicability threshold of 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

5. This permit is issued based on the new 211 Diameter FPEO Line not being a new or reconstructed major source of hazardous air pollutants, so that it is not subject to a case-by-case determination of Maximum Achievable Control Technology (MACT), pursuant to Section 112(g) of the Clean Air Act.

6. Two copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

7. The 211 Diameter FPEO Line may be operated for 365 days under this construction permit.

It should be noted that the 8,000 gallon end compound storage tank is exempt from state permit requirements, pursuant to 35 IAC 201.146(n)(1).

If you have any questions on this, please call Jason Schnepp at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JMS:jar

cc: Region 2